

MAY 2005
FACT SHEET
Bureau of Indians Affairs (BIA) - Lukachukai Community School
NPDES Permit No. NN0030339

I. Introduction

The U.S. Bureau of Indian Affairs-Chinle Agency (“BIA”) of the Department of the Interior was issued a National Pollutant Discharge Elimination System (“NPDES”) Permit (previously No. AZ0110507) on December 31, 1973, for the BIA Lukachukai Community School wastewater treatment lagoon system. The permit became effective on December 31, 1973, and expired on December 1, 1978. In 1978, it was determined that the facility would be a zero-discharge facility and, therefore, no permit was needed or renewed. The BIA reapplied for a permit reissuance on December 13, 2002. The facility is not considered a publicly-owned treatment works (“POTW”) because it is a federal facility.

Applicant Address: U.S. Department of the Interior
Bureau of Indian Affairs
Chinle Agency
P.O. Box 7H
Chinle, AZ 86503

Applicant Contact: Roland Woody, Facility Manager
(928) 674-5194

Facility Address: Lukachukai Community School
Navajo Route 13
Lukachukai, Apache, Arizona 86507

Facility Contact: Duane Sarricino
(928) 787-4407

II. Background

The BIA Lukachukai Boarding School wastewater treatment lagoon are located in Lukachukai, Arizona, Apache County, within the Southwest portion of the Navajo Nation. The facility serves a population of approximately 200, receiving only domestic sewage, with a design flow of 0.025 MGD. The facility consists of a three-cell lagoon system for primary settling, where wastewater from the Lukachukai Community School is gravity fled to cell #1 for preliminary settling. Transfer piping then allows wastewater to flow in succession from Cell #1 to Cell #2 and Cell #3. There is no pretreatment or aeration of the wastewater. Effluent will be intermittently discharged through a 6-inch PVC pipe from Outfall No. 001 into Tohtso creek, a tributary to Chinle Wash, a tributary to the San Juan River. Any

sampling and monitoring under the proposed permit shall be performed at Outfall No. 001.

The BIA Lukachukai lagoon system has not discharged for a number of years, a condition which the BIA believes is attributable to a combination of conditions, the use of an evaporation lagoon as well as persistent local weather patterns suffer of long-term drought in the region, prior to recent wet-weather conditions.

EPA has determined that due to the quantity, frequency, type and location of the discharge, effluent released in accordance with this permit will have “No Effect” on any threatened or endangered species that may be present in the area. No requirements specific to the protection of endangered species are proposed in the permit. A copy of the permit and fact sheet is being sent to the U.S. Fish and Wildlife Services for review during the public comment period.

III. Navajo Nation Water Quality Standards

Pursuant to the Water Quality Act of 1987 and the “EPA Policy for the Administration of Environmental Programs on Indian Reservations” (November 8, 1987), EPA will work directly with Indian Tribal governments on a one-to-one basis. This conforms with the Federal Indian Policy of January 24, 1983. The Navajo Nation has received Treatment as a State (“TAS”) for Section 106 of the Clean Water Act (“CWA”). They have applied but have not received TAS for the purposes of Section 303 of the CWA. Section 106 grant money was used to develop water quality standards and use designations, which must be approved under Section 303 by EPA Region 9.

All four of the receiving waters listed flow through the Navajo Nation. As such, they would ideally be protected by water quality standards developed by the Navajo Nation. The Navajo Nation Surface Water Quality Standards (“NNSWQS”) were originally approved by the Resources Committee of the Navajo Nation Council on November 9, 1999. Amendments to the NNSWQS were approved by the Resources Committee on July 30, 2004. The Navajo Nation anticipates receipt of TAS for the purposes of Section 303 of the CWA. In the interim until the NNSWQS are formally approved by EPA, those water quality standards will be used on a best professional judgment basis for purposes of developing water quality based effluent limitations.

IV. Basis of Proposed Permit Requirements

The proposed discharge limitations are based on:

- A. Secondary Treatment Regulations contained in 40 CFR Part 133, Sections 133.101 through 133.105, promulgated September 20, 1984, and most recently amended on January 27, 1989. EPA used these regulations and its best professional judgment (BPJ) to develop limits for this facility.

- B. Navajo Nation Surface Water Quality Standards revised and promulgated on July 30, 2004.

V. Designated Uses of the Receiving Water

The designated uses of the receiving waters (Tohtso creek, Chinle Wash, San Juan River), are defined by the NNSWQS as primary human contact, secondary human contact, agriculture water supply, aquatic habitat, and livestock and wildlife watering (Table 204.1, page 25.)

VI. Determination of Effluent Limitations, Monitoring, and Reporting Requirements

A. Flow Rates

Under the proposed permit, there is no flow limit, but the flow must be monitored and reported. The monitoring frequency is once/month.

B. Five-Day Biochemical Oxygen Demand (BOD₅)

Under the proposed permit, the discharge shall not exceed a weekly average of 65 mg/l and a monthly average of 45 mg/l BOD₅ and shall achieve no less than a monthly average rate of 65% removal. These limits are required under 40 CFR Part 133.102(a) and 133.105(a)(3). The limits are designated as 30-day and 7 day averages since the facility operate in a manner similar to a POTW, and it would be impracticable to do otherwise [40 CFR 122.45 (d).]

Under 40 CFR Part 122.45(f), mass limits are required for BOD₅. Based upon the 0.025 MGD flow, the mass limits for BOD₅ are based on the following calculations:

Monthly average

$$\frac{0.025 \text{ MG}}{\text{day}} \times \frac{45 \text{ mg}}{1} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{1 \text{ lb}} = 4.2 \text{ kg/day}$$

Weekly average

$$\frac{0.025 \text{ MG}}{\text{day}} \times \frac{65 \text{ mg}}{1} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{1 \text{ lb}} = 6.1 \text{ kg/day}$$

The daily maximum will also be monitored and reported. The monitoring frequency is once/month.

C. Total Suspended Solids (TSS)

Under the proposed permit, the discharge shall not exceed a weekly average of 135 mg/l and a monthly average of 90 mg/l TSS, and shall achieve no less than a monthly average rate of 65% removal. These limitations (Alternate State Requirements) are consistent with 40 CFR 133.101(f), 133.102(b), and 133.105 (b). Mass limit requirements in accordance with 40 CFR 122.45(f) have also been set in the proposed permit. Mass loadings shall not exceed a 7-day average of 12.7 kg/day and a 30-day average of 8.5 kg/day. The monitoring frequency is once/month.

D. Determination of Effluent Limitations for *E. coli*

In the proposed permit, the monthly geometric mean of *E. coli* shall not exceed 126/100 ml and 576/100 ml as a single sample maximum. These limits are based on the NNSWQS for primary human contact (p.26). The monitoring frequency is once/month.

E. Total Residual Chlorine (TRC)

The permit requires chlorination of the effluent before discharge. The discharge shall not exceed a monthly average of 5 µg/l and 11.0 µg/l as a single sample maximum, based on the NNSWQS for aquatic habitat for Tohtso Creek. The monitoring frequency is once/week.

F. Total Dissolved Solids (TDS)

The regulations at 40 CFR 122.44(i) allow requirements for monitoring as determined to be necessary. The monitoring frequency is once/quarter.

G. Ammonia (as Total Ammonia Nitrogen in mg N/L)

The proposed permit requires monitoring for ammonia. The monitoring frequency is once/quarter. If analytical results for the first four quarters reveal ammonia levels are below EPA's National Water Quality Criteria for ammonia, the monitoring frequency will decrease to once/year. The regulations at 40 CFR 122.44(i) allow requirement for monitoring as determined to be necessary. The criteria for ammonia are pH and temperature dependent.

H. pH

The proposed permit requires that effluent pH not fall below 6.5 or above 9.0 standard pH units, consistent with the NNSWQS for the Polacca Wash. The monitoring frequency is once/month.

I. Temperature

The proposed permit establishes a monitoring requirement for temperature. The monitoring frequency is once/quarter.

VII. Reporting

The proposed permit requires discharge data obtained during the previous three months to be summarized and reported monthly. If there is no discharge for the month, indicate “Zero Discharge.” These reports are due January 28, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the Navajo Nation EPA.

VIII. General Standards

The proposed permit sets general conditions based on narrative water quality standards contained in Section 203 of the NNSWQS. These general standards are set forth in Section B (“General Discharge Specifications”) of the permit.

IX. Permit Reopener

At this time, there is no reasonable potential to establish any other water quality-based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursions above water quality criteria, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. The proposed permit may be modified, in accordance with the requirements set forth at 40 CFR 122.44 and 124.14, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new Tribal water quality standards.

X. Biosolids Requirements

The permittee shall submit a report 60 days prior to disposal of biosolids. The report shall discuss the quantity of biosolids produced, the treatment applied to biosolids including process parameters, disposal methods, and, if land applied, analyses for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Zinc, and Selenium, and for organic-N, ammonium-N, and nitrate-N, all expressed in mg/kg biosolids on a 100% dry weight basis. The permittee shall comply with all standards for biosolids use and disposal of Section 405(d) of the CWA, and 40 CFR Parts 257, 258 and 503.

XI. Endangered Species Act

EPA has determined that discharge in compliance with this permit will have no effect on threatened or endangered species.

XII. Written Comments

Persons who wish to comment upon, object to the proposed action, or request a public hearing pursuant to 40 CFR Part 124.11 should submit their comments and requests in writing within thirty (30) days from the date of the Public Notice, either in person or by mail to:

U.S. Environmental Protection Agency, Region IX
CWA Standards and Permits Office (WTR-5)
Attn: Linh Tran
75 Hawthorne Street
San Francisco, CA 94105
Telephone: (415) 972-3511

XIII. Information and Copying

The Administrative Record, which contains the draft NPDES permit, the fact sheet, comments received, and other relevant documents, is available for review and may be obtained by calling or writing to the above address.

All comments or objections received within thirty (30) days from the date of the Public Notice, will be retained and considered in the formulation of the final determination regarding the permit issuance.

XIV. Public Hearing

When public interest warrants, the Regional Administrator shall hold a public hearing and such notice of hearing shall be issued by public notice at least thirty (30) days prior to the hearing date. A request for a public hearing must be in writing and must also state the nature of the issue proposed to be raised in the hearing.